

BLM LIBRARY



88045253

DON G. BOYER
Printing Management Specialist

ROSWELL DISTRICT WILDERNESS

FINAL ENVIRONMENTAL ASSESSMENT



U.S. Department of the Interior
Bureau of Land Management
Roswell District
New Mexico
August 1984

QH
76.5
.N6
R679
1984

BLM-NM-ES-84-021-4332



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Roswell District Office

P. O. Box 1397

Roswell, New Mexico 88201

IN REPLY
REFER TO:

8520

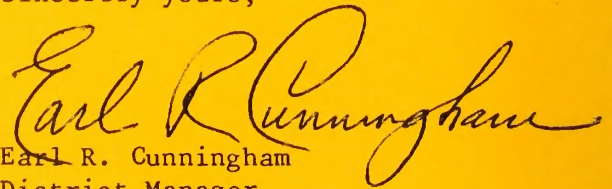
Dear Interested Party:

This document is the Final Environmental Assessment (EA) for 2 Bureau of Land Management (BLM) Wilderness Study Areas (WSAs) in the Roswell District. Preliminary wilderness suitability recommendations for these WSAs were previously released for public comment in a draft document: the Roswell District Wilderness Draft Environmental Assessment (March 1983).

The District Manager's recommendations displayed in this EA are based on the Area Managers' recommendations presented in the Draft EA, public comments on the Draft EA, and any additional resource information obtained during finalization of the site-specific Wilderness Analysis Report (WAR) for each WSA.

The information presented in this Final EA will serve as the data base for the Roswell District's WSAs addressed in the BLM New Mexico Statewide Wilderness Environmental Impact Statement (EIS). The EIS will include the wilderness suitability recommendations of the BLM New Mexico State Director. Preparation of the EIS is scheduled to begin in the Fall of 1984. This Final EA will be available to the public throughout the scoping process for the EIS to assist in the identification of significant issues to be addressed in the EIS.

Sincerely yours,



Earl R. Cunningham
District Manager

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

76.5
.N6
R67
1989

ROSWELL DISTRICT
WILDERNESS
FINAL ENVIRONMENTAL ASSESSMENT

Table of Contents

	<u>Starts on Page:</u>
CHAPTER 1 - PURPOSE AND NEED	1-1
INTRODUCTION	1-1
NEED FOR THE ACTION	1-1
THE BLM NEW MEXICO WILDERNESS STUDY PLANNING PROCESS	1-2
MAP 1-1	1-3
WILDERNESS STUDY AREAS IN THE ROSWELL DISTRICT	1-4
MAP 1-2	1-5
 CHAPTER 2 - ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE	 2-1
 CHAPTER 3 - AFFECTED ENVIRONMENT	 3-1
OVERVIEW OF THE ROSWELL DISTRICT	3-1
SOCIAL AND ECONOMIC CONDITIONS	3-1
WILDERNESS STUDY AREAS	3-1
TABLE 3-1: SUMMARY OF AFFECTED ENVIRONMENT	3-2
TABLE 3-2: EXISTING AND POTENTIAL USES	3-3
 CHAPTER 4 - ENVIRONMENTAL CONSEQUENCES	 4-1
SUMMARY OF IMPACTS	4-1
SOCIAL AND ECONOMIC IMPACTS	4-1
SUMMARY OF ENVIRONMENTAL CONSEQUENCES	4-2
 CHAPTER 5 - CONSULTATION AND COORDINATION	 5-1
PURPOSE OF SCOPING	5-1
SCOPING ACTIVITIES	5-1
PUBLIC COMMENT SUMMARY	5-2
LIST OF PREPARERS	5-3
 REFERENCES	 R-1

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

CHAPTER 1

PURPOSE AND NEED

INTRODUCTION

This document is the Final Environmental Assessment (EA) for 2 Wilderness Study Areas (WSAs) administered by the Roswell District. A preliminary recommendation made by the Roswell Resource Area Manager for these WSAs was released for public review in the Roswell District Wilderness Draft Environmental Assessment (March 1983). This final EA contains the Roswell District Manager's recommendation for both WSAs.

NEED FOR THE ACTION

The Federal Land Policy and Management Act (FLPMA) of 1976 mandated the Bureau of Land Management (BLM) to examine the wilderness potential of certain areas of public land. The wilderness review provision of FLPMA, Section 603, directs the BLM to conduct an inventory to identify all roadless areas of 5,000 acres or more that have wilderness characteristics. These areas are called Wilderness Study Areas (WSAs).

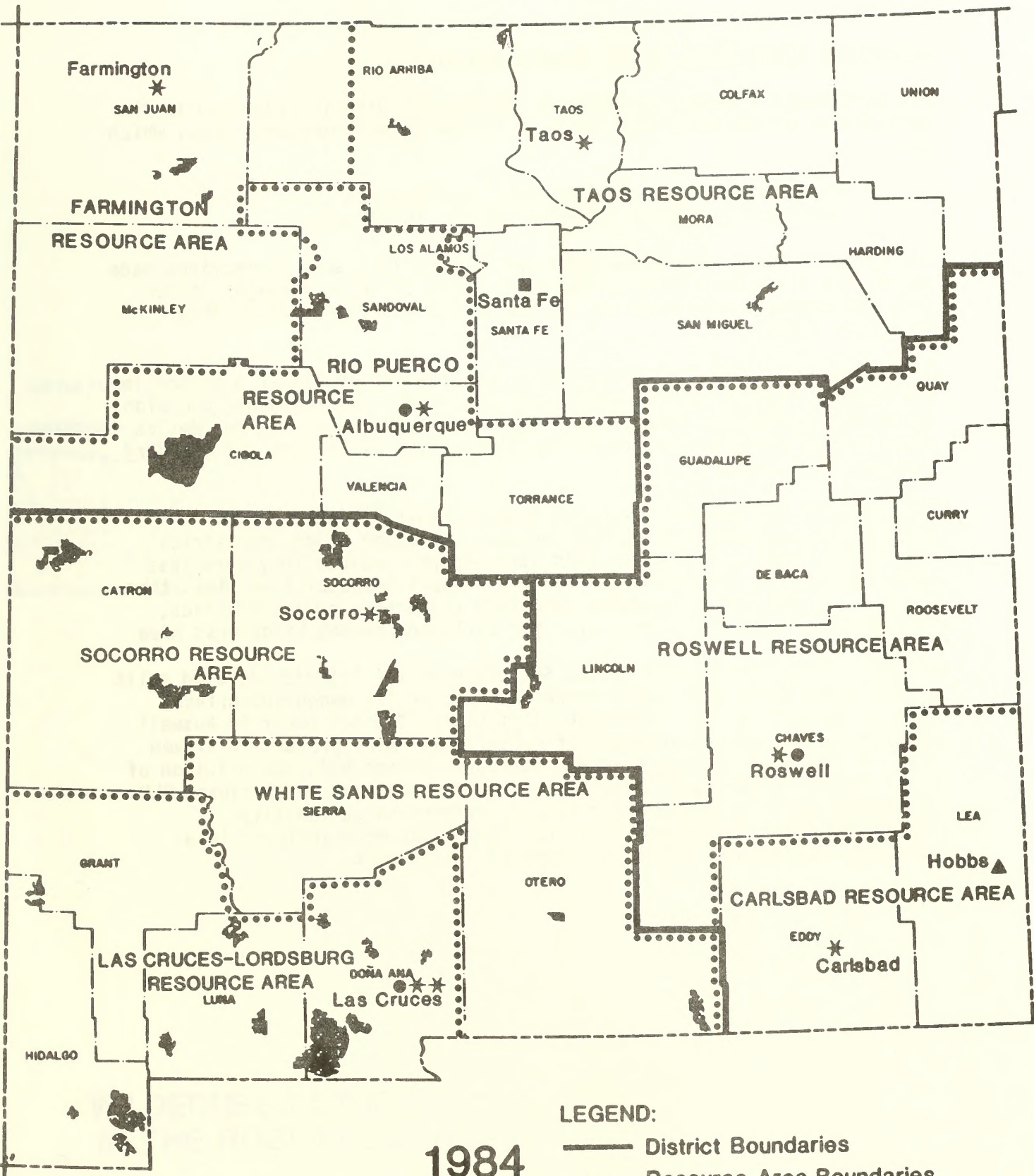
Once WSAs have been identified, they are studied through BLM's planning system to determine whether each is suitable for preservation as wilderness or is more suitable for other uses. The findings of these studies lead to recommendations, through the Secretary of the Interior and the President, to Congress. Only Congress has the authority to designate public land as wilderness.

THE BLM NEW MEXICO WILDERNESS STUDY PLANNING PROCESS

In New Mexico, 37 WSAs (see Map 1-1) are being studied as part of a statewide planning process. In accordance with BLM planning regulations, a Category III plan amendment process is being followed. The process provides for site-specific analysis through preparation of district EA's. After the district EA's are finalized, a statewide Draft EIS will be prepared which will summarize cumulative impacts and include the recommendations of the BLM New Mexico State Director. These recommendations will be based upon the District and Area Managers' recommendations and any new information including public comment. Additionally, the State Director's recommendations will take into account an additional BLM Wilderness Study Criterion which requires consideration of representation of basic ecosystems in the National Wilderness Preservation System. After public comment and subsequent revisions, a Final EIS and Wilderness Study Report will be prepared. Recommendations will be made through the Secretary of the Interior to the President followed by Congressional action. These EA's, the statewide EIS, and subsequent decisions in conjunction with Congressional action will serve to amend current land use plans.

Through this wilderness study and planning process, the Roswell District will be amending one land use plan. The Roswell Resource Area plan will be amended by incorporating the Congressional decision on the Carrizozo Lava Flow and Little Black Peak WSAs.

This Final EA summarizes impacts from a districtwide perspective for Little Black Peak and Carrizozo Lava Flow WSAs. Detailed discussions of these WSAs are included in the Wilderness Analysis Report in Appendix 1 which is available as a separate document. Due to the similarities and common boundary of the Carrizozo Lava Flow and Little Black Peak WSAs, these two areas are treated as one combined WSA throughout this EA.



**1984
NEW MEXICO
BUREAU OF LAND
MANAGEMENT**

- LEGEND:**
- District Boundaries
 - Resource Area Boundaries
 - State Office
 - District Office
 - ★ Resource Area Office
 - ▲ Satellite Office

WILDERNESS STUDY AREAS IN THE ROSWELL DISTRICT

The wilderness inventory process in the Roswell District resulted in the designation of two WSAs (see Map 1-2) in the Roswell Resource Area, which are:

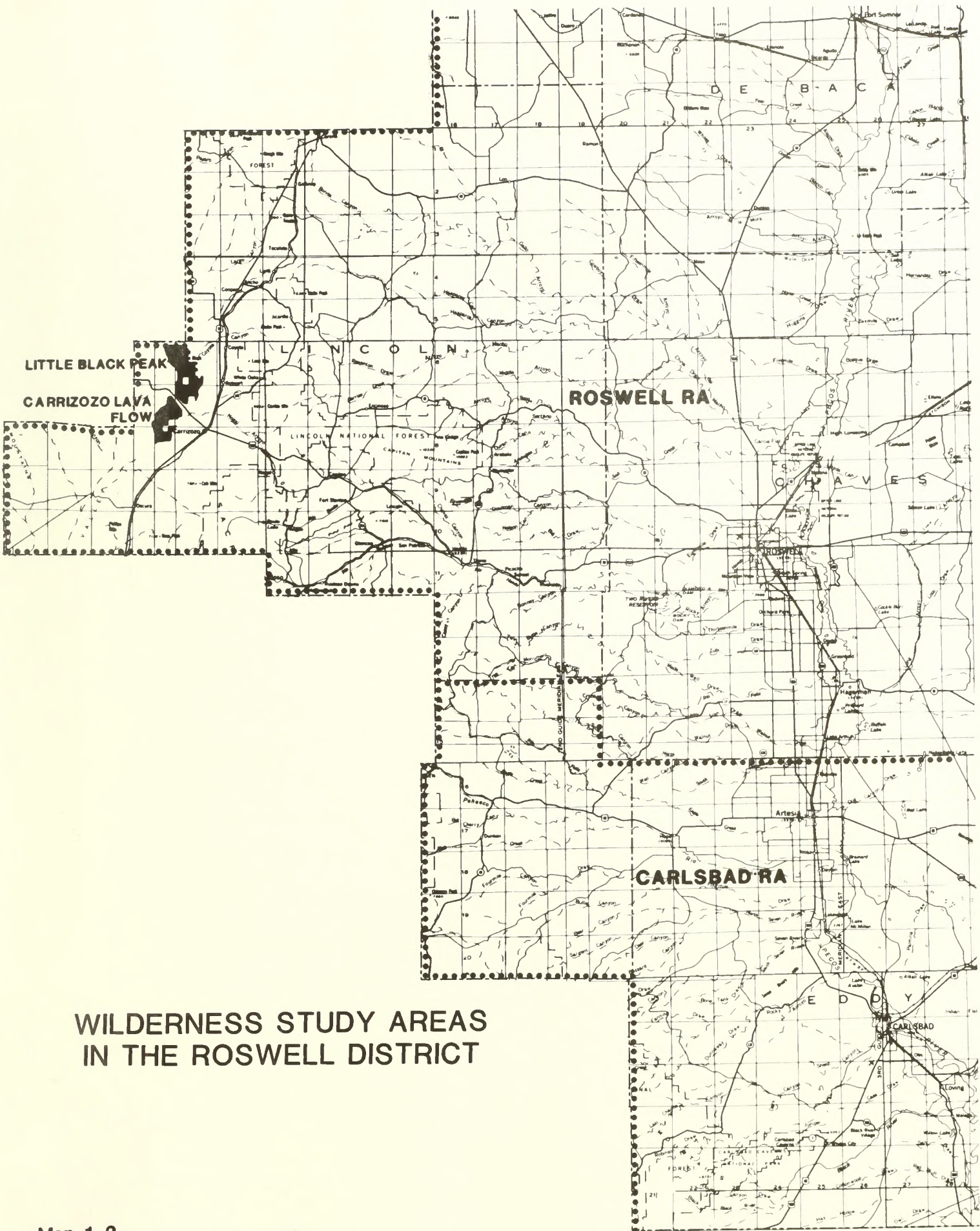
- Little Black Peak (NM-060-109) 15,072 acres
- Carrizozo Lava Flow (NM-060-110A-1) 10,240 acres

The above acreages are approximate and also reflect some corrections made during the wilderness study. Therefore, some of these acreages differ from the acreages published in the New Mexico Wilderness Study Area Decisions (1980).

On December 30, 1982 the Secretary of the Interior published a notice in the Federal Register that amended previous wilderness inventory decisions to ensure conformance with recent legal interpretations. In New Mexico these policy changes resulted in the elimination of 12 WSAs and boundary changes in 11 WSAs.

Four WSAs in the Carlsbad Resource Area of Roswell District were eliminated as a result of policy changes. Lonesome Ridge, McKittrick Canyon and Devil's Den Canyon WSAs were dropped because they were less than 5,000 acres. The Mudgetts WSA was dropped because it was less than 5,000 acres and did not possess mandatory wilderness characteristics, even though it was contiguous with the Carlsbad Caverns Wilderness Area.

Another policy change made by the Secretary of the Interior deleted split estate lands (federally owned surface/non-federally owned subsurface) from wilderness review. Although split estate did not occur in Roswell District WSAs, varying acreages of split estate were present in eleven WSAs in other BLM districts in New Mexico. In some WSAs the deletion of split estate lands caused significant boundary changes which caused BLM to restudy these areas in order to make wilderness suitability recommendations. Recommendations for these WSAs were analyzed in a separate supplemental Draft Environmental Assessment.



**WILDERNESS STUDY AREAS
IN THE ROSWELL DISTRICT**

CHAPTER 2

ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE

Three alternatives are evaluated for each WSA: All Wilderness, Amended Boundary (Partial Wilderness), and No Action (No Wilderness). These alternatives are summarized in Table 2-1 below. There were no additional alternatives considered but not analyzed for these WSAs.

The preferred alternative identified in Table 2-1 represents the recommendations of both the Roswell Resource Area Manager and Roswell District Manager for Carrizozo Lava Flow and Little Black Peak WSAs.

TABLE 2-1
SUMMARY OF ALTERNATIVES

WSA/Acres	Preferred Alternative	All Wilderness	Amended Boundary (Partial Wilderness)	No Action (No Wilderness)
Little Black Peak- Carrizozo Lava Flow/25,312 acres	Recommend 24,249 acres suitable for wilderness designa- tion. Manage the remaining 1,063 acres under no special designa- tion.	Recommend 25,312 acres suitable for wilderness designation.	Same as Preferred Alternative.	Recommend 25,312 acres unsuitable for wilderness designation. Manage entire acreage under no special designa- tion.

CHAPTER 3

AFFECTED ENVIRONMENT

OVERVIEW OF THE ROSWELL DISTRICT

The Roswell District is located in southeastern New Mexico and is divided into two Resource Areas. The Roswell Resource Area administers nearly 1.8 million acres of public land, mostly in Lincoln and Chaves Counties, with some scattered public lands in De Baca, Guadalupe, Roosevelt, and Quay Counties. Little Black Peak Wilderness Study Area (WSA) and Carrizozo Lava Flow WSA are located in western Lincoln County. The Carlsbad Resource Area administers over 2 million acres of public land in Lea, Eddy, and southwestern Chaves Counties. No WSA s are located in the Carlsbad Resource Area.

Oil and gas production, potash mining, livestock grazing and recreation are the major uses of public lands in the Roswell District. These activities, along with other agricultural activities, also constitute the major uses on non-public lands in the area.

SOCIAL AND ECONOMIC CONDITIONS

Introduction

The primary social and economic effects of wilderness recommendations in the Roswell District are expected to be confined to Lincoln County, which comprises the immediate geographic and economic area that would interact with activities taking place in the WSA s.

Only very minor impacts would occur when they are considered in the context of a greater geographic area. These would be limited to impacts on social attitudes toward wilderness in the region and possibly in other parts of the nation.

Population and Economy

The population of Lincoln County is divided between rural areas and the incorporated areas of Ruidoso and Carrizozo. The rapid growth of Ruidoso is quickly moving the balance of population to the incorporated areas. Ranching continues to be important to the local economy of Lincoln County, but the recreation and tourism industry far surpasses it as the principal source of income and employment. Government and construction are also important employers in the county.

The per capita income for Lincoln County is below the state average. The unemployment rate for this county falls below the current state unemployment rate.

WILDERNESS STUDY AREAS

Tables 3-1 and 3-2 summarize the affected environment and the existing and potential uses of the WSA s.

Table 3-1

SUMMARY OF AFFECTED ENVIRONMENT FOR
LITTLE BLACK PEAK/CARRIZOZO LAVA FLOW

PORTION OF WSAs	ACREAGE	LAND STATUS	TOPOGRAPHY	GEOLOGY	VEGETATION	WILDLIFE	IT&E SPECIES	CULTURAL	WILDERNESS VALUES
(1) Entire WSAs	25,312	25,312 public land acres 640 acres of state inhold- ings. (Not a part of WSAs)	Volcanic cinder cone and rough lava field/ limestone hills & level plains bordering lava flow.	Recent basalt flow & soils on top of sedimen- tary rock forma- tions/ small areas of expos- ed intrusive & sedimentary rocks.	25,312 acres of mixed shrubs, grasses & scat- tered juniper trees.	Mule deer, barbary sheep, melanistic races of small animals, raptors, valuable wildlife habitat.	Temporary habitat for migratory raptors/moist sinkholes are habitat for one state plant of special concern.	Limited cultural values, consists of scattered historical sites & seasonally occupied prehistoric sites.	High quality natu- rality & solitude values & moderate quality recreation values in lava flow moderate to low quality values in other parts of WSAs
(2) Portion Recom- mended Suit- able	24,249	24,249 public acres. 640 acres of state inhold- ings. (Not a part of WSAs)	Same as entire WSAs, except that most level plains & small area of lava & limestone hills are excluded from recommend- ation.	Same as entire WSAs except that small por- tion of lava flow, most soil covered areas & some exposed sedi- mentary rocks excluded from recommendation.	24,249 acres of mixed shrubs, grasses, & scattered juniper trees.	Same as entire WSAs.	Same as entire WSAs.	Same as entire WSAs.	Same as entire WSAs except areas with moderate and low quality values are excluded.
(3) Portion Recom- mended Unsuit- able	1,063	1,063 public acres.	Level plains, limestone hills & small area of lava flow.	Small areas of sedimentary rocks, soil- covered areas & basalt flow.	1,063 acres of grasses & mixed shrubs/few trees.	Less wildlife and habitat diversity than descriptions (1) or (2).	No significant habitat for migratory raptors & special concern plant.	No known cultural values.	Contains portions WSAs with lowest quality values.

TABLE 3-2

EXISTING AND POTENTIAL USES IN
LITTLE BLACK PEAK/CARRIZOZO LAVA FLOW WSAs

PORION OF WSAs	MINERALS	LIVESTOCK GRAZING	RECREATION	EDUCATION/ RESEARCH	REALTY ACTIONS	WILDLIFE
(1) Entire WSAs	Low favorability for development of known & potential mineral occurrences. OTHER Military training use of airspace above WSAs.	WSAs contain minor portions of four cattle allotments. No range develop- ments are proposed. Potential use by goats.	Uses include hunting, hiking bird watching, nature study & spelunking.	Study & inter- pretation of plants, animals and geologic processes.	Potential reconstruc- tion of US Highway 380 inside of present right-of- way.	Recreation & Education/ research uses. No special management or habitat improvement projects proposed.
(2) Portion Recommended Suitable	<u>MINERALS</u> Same as above (Entire WSAs)	<u>LIVESTOCK GRAZING</u> Same as above <u>OTHER</u> Same as entire WSAs.	<u>RECREATION</u> Same as above	<u>EDUCATION /RESEARCH</u> Same as above	<u>REALTY ACTIONS</u> N/A	<u>WILDLIFE</u> Same as above.
(3) Portion Recommended Unsuitable	<u>MINERALS</u> Same as above <u>OTHER</u> Same as entire WSAs.	<u>LIVESTOCK GRAZING</u> Same as above	<u>RECREATION</u> Little recrea- tional use/ limited op- portunities for uses de- scribed in entire WSAs.	<u>EDUCATION /RESEARCH</u> limited research potential	<u>REALTY ACTIONS</u> potential expansion in width of highway and as- sociated right-of- way.	<u>WILDLIFE</u> Same as above.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

SUMMARY OF IMPACTS

Table 4-1 in this chapter presents a summary of environmental consequences described in the Wilderness Analysis Report located in Appendix 1. In developing this table, the evaluation of environmental impacts were used to classify impacts into three categories. These categories are significant impacts, clearly insignificant impacts, and impacts which need to be addressed in order to show the full range of environmental consequences. Significant impacts are underlined in the Table. Significant impacts will be carried forward into the Statewide Wilderness EIS and will be addressed along with regional/statewide impacts and application of the BLM Wilderness Study Criterion (ecotype) which requires consideration of basic ecosystems in the National Wilderness Preservation System. If these areas are designated as wilderness, a site-specific wilderness management plan will be prepared. This plan will provide the opportunity to incorporate measures designed to mitigate adverse environmental impacts, where feasible and reasonable measures exist. The environmental consequences described in this chapter were determined without considering potential impact reduction measures that could be included in a wilderness management plan.

SOCIAL AND ECONOMIC IMPACTS

None of the alternatives would have a significant impact on the population, economy, employment or social services in the Roswell District.

Wilderness designation may enhance the preservation value of the wilderness. The preservation value of wilderness includes option, existence, and bequest values of the general public. The option value is defined as the willingness to pay for the opportunity to have access to wilderness areas for recreation use in the future. The existence value is defined as the amount of money people are willing to pay for the knowledge that natural habitat for plants, fish, and wildlife are protected in wilderness areas. The bequest value is defined as the willingness to pay for the satisfaction derived from endowing future generations with wilderness resources (Walsh et al., 1981). Quantification of these values is beyond the scope of this document.

Minor inconveniences to livestock operations may result due to the restriction on vehicular access as a result of wilderness designation. However, most of the current vehicle use by ranchers takes place on roads outside the WSAs.

Under wilderness designation and management, oil and gas leases that are not grandfathered could not be developed. A "grandfathered" lease is one acquired prior to the Federal Land Policy and Management Act of 1976. There are no grandfathered leases in both WSAs since all leases were issued after September 1980.

Wilderness designation would not change the general attitudes of local residents. Ranchers have expressed concern that wilderness would limit their abilities to conduct their operations. Representatives from the mineral industry have stated that wilderness designation may permanently lock up energy or mineral resources that are critical to the nation.

On a regional or statewide level, members of the public have expressed the belief that wilderness designation enhances management of scenic and natural values, as well as recreational opportunities.

TABLE 4-1

SUMMARY OF ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES FOR
LITTLE BLACK PEAK/CARRIZOZO LAVA FLOW WSAs
(Significant impacts are underlined)

ALTERNATIVES	ACREAGE	MINERALS	VEGETATION	LIVESTOCK GRAZING	RECREATION	EDUCATION/ RESEARCH	REALTY ACTIONS	WILDLIFE	VISUAL	WILDERNESS
All Wilder- ness	125,312	Insignificant impacts upon all mineral uses due to low poten- tials for development/ occurrence.	No significant impact to water and soil. Restrictions on surface disturbance & potential grazing would protect vegetation.	No impact to existing use. Management to maintain vegetative diversity & other wilder- ness values would cause insignificant impact to potential grazing.	Increased levels of visitor use. Pro- hibition of motorized activities on access- ible ter- rain & trails.	Protection of natural ecosystem would en- sure long- term avail- ability of education/ research values.	Expansion of US Hwy 380 would be precluded.	Maximum amount of habitat would be protected.	Long-term protection of existing resources.	Wilderness values would receive long- term Congres- sional pro- tection.
Amended Boundary	124,249	Mineral uses could be allowed on lands excluded from alternative/ impacts not significant.	Same as all wilderness except vegetation would be protected on a slightly smaller area.	Same as all wilderness except slightly smaller area affected.	Same as all wild- erness ex- cept mo- torized use on most ex- isting ve- hicle routes and level ter- rain could take place	Areas having highest values would be protected.	No signifi- cant impacts.	Undisturbed habitat in lava flow would be protected. Highway fence construction could affect movement of big game species.	Area with highest scenic quality would be protected.	Lands with highest quality wild- erness values would be protected.
No action	125,312	Resource use could increase slightly over the long term/ uses still hindered by low potentials and accessi- bility problems.	Surface distur- bances would have localized effect, and livestock graz- ing could alter vegetative diversity.	No signifi- cant impacts.	Primitive recreation opportuni- ties are expected to be available in most of the area. Motorized activities not impacted.	Disturbance of natural vegetation would impair research values. Long-term availability of values not ensured.	No signifi- cant impacts.	Minor long- term impact to habitat in areas where disturbance occurs. Fence construction impacts could also occur.	Visual re- sources would be afforded less stringent protection.	Wilderness values would be impaired or lost in limit- ed areas along the lava flow periphery and other areas where surface disturbance occurs (rug- ged terrain would prevent impacts in most of the area).

CHAPTER 5

CONSULTATION AND COORDINATION

PURPOSE OF SCOPING

The Council on Environmental Quality Regulations implementing the procedural provisions of the National Environmental Policy Act and the BLM planning regulations provide for an early and open process to determine the scope of issues to be addressed and to identify the significant issues related to the proposed alternatives. This process is termed "scoping." In addition, the lead agency is required to inform and involve affected Federal, State, and local agencies, Indian tribes and other interested persons. The process is designed to identify and emphasize the significant issues and eliminate from detailed consideration those that are either not significant or have been covered by earlier environmental review. This process results in a more concise document.

SCOPING ACTIVITIES

During the study phase of the wilderness review process, various Federal, State, and local agencies, interest groups and individuals were contacted. These contacts were made to inform the public about the wilderness study process and to gather resource information and identify significant issues from the public to incorporate into the Wilderness Analysis Report (WAR).

Scoping activities for this statewide wilderness study in New Mexico were a combined effort by BLM state, district and resource area offices. The scoping process started in mid-January 1982 with the issuance of news releases and a Federal Register notice by the BLM State Office in Santa Fe. Scoping activities at the district and resource area office levels started in late January and early February 1982. The Roswell Area Manager contacted various governmental agencies by letter and requested information concerning plans or policies that would be relevant to the study of specific Wilderness Study Areas (WSAs). In late April, the Roswell District Manager sent letters to over 300 agencies, groups and individuals that had previously received mailings during the district wilderness inventory process. Those contacts were invited to participate in the wilderness study and notified about pending open house meetings in Roswell, Carlsbad and Carrizozo, New Mexico. Twenty-two people subsequently attended the series of open house meetings to voice their concerns or request additional information about the study process. The most recent consultation activity consisted of a briefing session held at Roswell for New Mexico Congressional delegation representatives in October 1982.

Records concerning consultation, coordination, scoping activities and public involvement efforts are on file at the Roswell District Office.

PUBLIC COMMENT SUMMARY

The intensity of public interest in Roswell District study efforts has been relatively meager, when compared with the extent of involvement expressed in other New Mexico BLM districts. Several public comments received during the scoping and study processes were very general in that they stated a preference only for more or less designated wilderness. Additional consultation and coordination took place during the public review period for the Draft Environmental Assessment (EA), and will occur during later stages of the statewide wilderness study.

A mailing list was assembled and continuously updated throughout the study process. Copies of the Draft EA were sent to grazing permittees, mineral lessees and in excess of 360 other parties that expressed an interest in the study of Roswell District WSAs.

During the public comment period on the Draft EA a total of 40 different agencies, groups or individuals provided comments to BLM. The categories of comments received and number of respondents making similar comments are tabulated below:

<u>COMMENT CATEGORIES</u>	<u>NO. OF COMMENTS</u>
Comments Supporting Wilderness...	
General support	7
All Wilderness	3
All Wilderness plus additional acreage	3
Amended Boundary Alternative	14
Comments Against Wilderness...	
Mineral conflicts	4
State law conflict	1
Other Comments...	
Acquire State Lands	4
Protect plants from collectors	2
Provide access for...	
Camping	1
Earth scientists	1
Mineral lessees	1
Mining claimants	1
Native American religious practice	1
Delete part of Carrizozo Lava Flow	1
Guarantee future grazing by goats	1
Conduct complete plant inventory	1
Make area a wildlife refuge	1
Designate aircraft corridors	1
Area not habitat for black hawk	1
No fencing along highway	1
Inventory and protect artifacts	2

Based on the generally supportive nature of comments received during the Draft EA review and lack of substantive comments which would influence a change in BLM's wilderness recommendations, the "Amended Boundary Alternative" is the Roswell Resource Area and Roswell District Manager's preferred alternative.

LIST OF PREPARERS

A list of persons involved in the preparation of the WAR and EA is provided in Table 5-1.

TABLE 5-1
LIST OF PREPARERS

NAME	EA/WAR CONTRIBUTIONS	EDUCATION	YEARS OF EXPERIENCE
Mike Bunker	Team Leader (Roswell WAR)- Visual resources, minerals, education/research, realty, wilderness values, EA preparation	B.S., Forestry	14.5
Mike Howard	Vegetation, livestock grazing	B.S., M.S. Wildlife Management	4.5
Joe Hummel	Recreation, education/research, realty	B.S., Natural Resources	8
Allan Lemley*	Geology, minerals	B.S., Geology	1
Wayne Ludington	Public comment analysis	B.S. Wildlife Management	9
Carol McDonald*	EA preparation, environmental coordination	B.A., M.A., English	7.5
Linda Rundell	Wildlife, cultural resources	B.S., Wildlife Management	5
Clarence Seagraves*	Soil, water, air	B.S., Agronomy	11.5

SUPPORT PERSONNEL (ROSWELL DISTRICT)

Arlene Martinez	Typist
Angie Medina	Typist
Linda Rowell	Typist
Marce' Scott	Typist
Sherry Spurrier	Typist

CONTRIBUTORS AND REVIEWERS

Earl Cunningham	District Manager, Roswell
John Gregg*	District Manager, Roswell*
Dick Bastin	Associate District Manager, Roswell
Jon Joseph	Wilderness Specialist, Santa Fe
Phil Kirk	Area Manager, Roswell
Phil Moreland*	Area Manager, Roswell*
Roy Stovall	Chief of Operations, Roswell
Hans Stuart*	Public Information Specialist, Roswell*
Joe Sovcik	Environmental Coordinator, Santa Fe
Hank Wilson	Geologist, Santa Fe
Dan Wood	Wilderness Specialist, Santa Fe*

*former employee or position

REFERENCES

- U.S. Department of the Interior, Bureau of Land Management.
November 1980. New Mexico Wilderness Study Area Decisions.
Santa Fe, New Mexico.
- U.S. Department of the Interior, Bureau of Land Management.
March 1983. Roswell District Wilderness Draft Environmental
Assessment. Roswell, New Mexico.
- Walsh, Richard G., Gillman, Richard B., and Loomis, John B., 1981.
Wilderness Resource Economics: Recreation Use and Preservation
Values. Department of Economics, Colorado State University,
Fort Collins, Colorado.

DLMLIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

ER'S CARD

679 1984
of Land
Roswell
District wilderness
environmental

DATE RETURNED	OFFICE	DATE RETURNED

(Continued on reverse)

QH 76.5 .N6 R679 1984
U. S. Bureau of Land
Management. Roswell
Roswell District wilderness
final environmental

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
P.O. Box 1397
ROSWELL, NM 88201
Return if not delivered in 10 days
OFFICIAL BUSINESS



POSTAGE AND FEES PAID
U.S. DEPARTMENT
OF THE INTERIOR
INT 415